

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2005/005953

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C07D305/14

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BEILSTEIN Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages.	Relevant to claim No.
Y	US 5 808 113 A (MURRAY ET AL) 15 September 1998 (1998-09-15) cited in the application the whole document	4-6
Y	US 5 319 112 A (KINGSTON ET AL) 7 June 1994 (1994-06-07) the whole document	4-6
Y	COMMERCON A ET AL: "IMPROVED PROTECTION AND ESTERIFICATION OF A PRECURSOR OF THE TAXOTERE AND TAXOL SIDE CHAINS" TETRAHEDRON LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 33, no. 36, 1992, pages 5185-5188, XP000650710 ISSN: 0040-4039 page 5186, step (b)	4-6
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

13 July 2005

Date of mailing of the international search report

14.09.05

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2005/005953

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PINES S H ET AL: "The Stereochemistry of 2,3-Diphenyl-1-methylpropylamine" JOURNAL OF MEDICINAL CHEMISTRY, vol. 10, no. 4, 1967, pages 725-728, XP002335874 page 726, column 1, last paragraph - column 2, paragraph 2 page 728; compounds IA-ID -----	4-6
A	MURRAY C K ET AL: "An Improved Method for Separating Paclitaxel and Cephalomannine Using Ozone and Girard Reagents" JOURNAL OF ORGANIC CHEMISTRY, vol. 61, 1996, pages 9038-9040, XP002335875 page 9038 -----	1-12
A	KINGSTON D G I ET AL: "An Improved Method for the Separation of Paclitaxel and Cephalomannine" JOURNAL OF NATURAL PRODUCTS, vol. 59, 1996, pages 167-168, XP002335876 the whole document -----	1-12

## INTERNATIONAL SEARCH REPORT

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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12

The preparation of paclitaxel and docetaxel from cephalomannine via the present primary amine taxane intermediate

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2. claims: 13-17

The preparation of paclitaxel and docetaxel starting from cinnamoyl halide

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3. claim: 18

The preparation of docetaxel from cephalomannine not via the primary amine taxane intermediate

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/005953

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5808113	A	15-09-1998	US 5679807 A	21-10-1997
			AU 694627 B2	23-07-1998
			AU 5021096 A	21-08-1996
			CA 2211799 A1	08-08-1996
			EP 0852581 A1	15-07-1998
			JP 11502516 T	02-03-1999
			WO 9623780 A1	08-08-1996
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US 5319112	A	07-06-1994	US 5470866 A	28-11-1995
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